

AMENDMENT TO THE CLAIMS

Please amend claims 5-7.

- 1) (original) A non-transgenic domesticated *L. esculentum* plant having a flavonol content in the flesh of the fruit of said plant that is greater than 0.5 µg/mgdwt.
- 2) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 1, wherein said flavonol content is greater than 1.0 µg/mgdwt.
- 3) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 1, wherein said flavonol content is greater than 1.5 µg/mgdwt.
- 4) (original) The *L. esculentum* plant according to claim 1, wherein said flavonol content is greater than approximately 2 µg/mgdwt.
- 5) (currently amended) The *L. esculentum* plant according to claim[[s]] 1,~~2,3,~~
and 4 wherein said flavonol content in said peel of said fruit is at least approximately 5 µg/mgdwt.
- 6) (currently amended) The *L. esculentum* plant according to claim[[s]] 1,~~2,3,~~
and 4 wherein said flavonol content in said peel of said fruit is at least approximately 10 µg/mgdwt.
- 7) (currently amended) The *L. esculentum* plant according to claim[[s]] 1,~~2,3,~~
and 4 wherein said flavonol content in said peel of said fruit is at least approximately 17 µg/mgdwt.
- 8) (original) Seed of said *L. esculentum* plant of claim 1.
- 9) (original) Fruit of said *L. esculentum* plant of claim 1.
- 10) (original) A *L. esculentum* plant, or parts thereof, produced by growing the seed of claim 8.
- 11) (original) A method of making a non-transgenic *L. esculentum* plant expressing flavonol in the peel and flesh of the fruit of said plant comprising the steps of:
 - a) crossing wild *Lycopersicon* species that express *CHI* in the peel and that express the genes of the flavonol biosynthetic pathway in the flesh with a *L. esculentum* plant to produce a hybrid plant;
 - b) harvesting fruit from said hybrid plant; and

- c) collecting seed from said fruit harvested in step b).
- 12) (original) The method of making a non-transgenic *L. esculentum* plant according to claim 11 further comprising the step of screening *Lycopersicon* accessions for expression of *CHI* in the peel and/or for expression of one or more of the genes of the flavonol biosynthetic pathway in the flesh.
- 13) (original) The method of making a non-transgenic *L. esculentum* plant according to claim 12 and, wherein said *Lycopersicon* species selected for crossing with a *L. esculentum* plant are *L. chilense* or *L. pennellii*, or any other wild tomato species that express the genes of the flavonol biosynthetic pathway in the flesh and *CHI* in the peel of said fruit.
- 14) (original) The method of making a non-transgenic *L. esculentum* plant according to claim 13, wherein the accessions selected for crossing are LA1963, LA2884, and LA1926.
- 15) (original) A non-transgenic domesticated *L. esculentum* plant comprising a genetic factor that up-regulates the flavonol biosynthesis pathway in the fruit flesh of said plant.
- 16) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 15, wherein the flavonol content in said fruit flesh is greater than 0.5 $\mu\text{g}/\text{mgdwt}$.
- 17) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 15, wherein the flavonol content in said fruit flesh is greater than 1.0 $\mu\text{g}/\text{mgdwt}$.
- 18) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 15, wherein the flavonol content in said fruit flesh is greater than 1.5 $\mu\text{g}/\text{mgdwt}$.
- 19) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 15, wherein the flavonol content in said fruit flesh is greater than approximately 2 $\mu\text{g}/\text{mgdwt}$.
- 20) (original) The *L. esculentum* plant according to claim 15 wherein the flavonol content in the peel of the fruit is at least approximately 5 $\mu\text{g}/\text{mgdwt}$.
- 21) (original) The *L. esculentum* plant according to claim 15 wherein said flavonol content in the peel of the fruit is at least approximately 10 $\mu\text{g}/\text{mgdwt}$.
- 22) (original) The *L. esculentum* plant according to claim 15 wherein said flavonol content in the peel of the fruit is at least approximately 17 $\mu\text{g}/\text{mgdwt}$.

- 23) (original) Seed of said *L. esculentum* plant of claim 15
- 24) (original) Fruit of said *L. esculentum* plant of claim 15.
- 25) (original) A *L. esculentum* plant, or parts thereof, produced by growing the seed of claim 23.
- 26) (original) A non-transgenic domesticated *L. esculentum* plant comprising a genetic factor that restores *CHI* expression in the fruit peel of said plant.
- 27) (original) The *L. esculentum* plant according to claim 26 wherein the flavonol content in said fruit peel is at least approximately 5 µg/mgdwt.
- 28) (original) The *L. esculentum* plant according to claim 26 wherein flavonol content in said fruit peel is at least approximately 10 µg/mgdwt.
- 29) (original) The *L. esculentum* plant according to claim 26 wherein the flavonol content in said fruit peel is at least approximately 17 µg/mgdwt.
- 30) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 26, wherein the flavonol content in the fruit flesh of said plant is greater than 0.5 µg/mgdwt.
- 31) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 26, wherein the flavonol content in the fruit flesh of said plant is greater than 1.0 µg/mgdwt.
- 32) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 26, wherein the flavonol content in the fruit flesh of said plant is greater than 1.5 µg/mgdwt.
- 33) (original) The non-transgenic domesticated *L. esculentum* plant according to claim 26, wherein the flavonol content in the fruit flesh of said plant is greater than approximately 2.0 µg/mgdwt.
- 34) (original) Seed of said *L. esculentum* plant of claim 26.
- 35) (original) Fruit of said *L. esculentum* plant of claim 26.
- 36) (original) A *L. esculentum* plant, or parts thereof, produced by growing the seed of claim 34.